SAFETY AND BUILDINGS DIVISION
Plumbing Product Review
P.O. Box 2658
Madison, Wisconsin 53701-2658
TTY: Contact Through Relay

Scott Walker, Governor
Dave Ross, Secretary

January 25, 2012

H&H SOLAR
KURT HUTTER
818 POST ROAD
MADISON WI 53713

Re: Description: WATER TREATMENT DEVICE - SITE SPECIFIC/COMMERCIAL
Manufacturer: H&H SOLAR
Product Name: PAOLI SCHOOLHOUSE SHOPS AND CAFÉ
Model Number(s): NITRATE REDUCTION (trans. i.d. 2031498)
Product File No: 20120044

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of January 25, 2014.

This approval is contingent upon compliance with the following stipulation(s):

- These devices have undergone sufficient testing to document the device's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.

- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.

- The finished installation must undergo a final inspection prior to the treated water being used for consumptive purposes. The Plumbing Consultant having jurisdiction in this area is Ryan Boebel. Mr. Boebel can be reached via the following:

  Phone: 608-412-3998
  E-mail: ryan.boebel@wi.gov

  If the treated water is used for consumptive purposes prior to passing the final inspection, then this approval may be rendered null and void and the device ordered removed. The Plumbing Consultant shall provide a written indication of the results of the final inspection to the system owner.

  When the final inspection has been passed, the Plumbing Consultant will notify the Wisconsin Department of Natural Resources (WDNR) Field Staff having authority over the well. The WDNR will then monitor the quality of the treated water to its satisfaction. Monitoring advice, which the WDNR is free to accept or reject, is provided elsewhere in this letter. The WDNR Field Staff having authority over this well is Robert Kaczmarek. Mr. Kaczmarek can be contacted via the following:

  Phone: 608-275-3202
  E-mail: Robert.Kaczmarek@Wisconsin.gov

- The suggested monitoring interval for this installation is quarterly. As a minimum, the following tests should be performed:

  1. nitrate
  2. nitrite

  The samples should be collected at a time of day when the device is under stress and at a time most remote from the last regeneration cycle as possible. Because this device is reportedly being installed on a PEX water supply system, concerns relating to decreased alkalinity and subsequent corrosion are not applicable.

- The anion exchange, nitrate reduction device being installed is approved under DSPS product file number 20100292. The approval letter can be viewed at:

  http://commerce.wi.gov/sb/docs/sb-ppalopp/wtd/20100292.pdf

  All stipulations displayed in the approval letter for product file number 20100292 must be adhered to.

- A flow control shall be installed to preclude the nitrate reduction device from exceeding its maximum rated service flow rate (i.e. 16 gpm).

- No bypass piping shall be installed on this nitrate reduction device.

- Any wall hydrant that is not served by the nitrate treatment device must have one, or more, of the following:

  1. The handles of the hydrant shall be removed;

  2. The hydrant shall be capped and sealed using solder; or

  3. Signage shall be posted immediately above the hydrant indicating the water is unfit for human consumption

- All water distribution piping shall be marked as required by Table 82.40-1a.

- The water treatment system includes a chemical injection pump. The chemical injection is an approved Pulsafeeder positive displacement pump and the chemical being injected is a NSF Standard 61 listed sodium carbonate (i.e. soda ash). The purpose of the chemical injection system is to reintroduce alkalinity downstream of the anion exchange process. Alkalinity is required to stabilize copper piping. The chemical feed system is intended to replace the alkalinity that may have been reduced via anion exchange thereby protecting the copper pipe downstream of the anion exchange.

- If this approved device is modified, or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.

NITRATE REDUCTION CAPABILITIES

Model Number	Salt 1 (lbs.)	Capacity 1♦ (grains)	Salt 2 (lbs.)	Capacity 2♦ (grains)	Salt 3 (lbs.)	Capacity 3♦ (grains)	Max. Flow* (gpm)
H125-NRS-40	20.0	33,600	40.0	40,800	60.0	44,000	16

♦ = capacities listed at 25% SO_4^{2-} **1 grain = 64.79891 mg**
1 grain/gal. = 17.1 mg/l *** = Flow restrictors must be installed to prevent exceeding the flow rate displayed**

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter
Engineering Consultant
Safety and Buildings Division
Department of Safety and Professional Services
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